

SN: 10/689,924
Docket No. S- 99,917
In Response to Office Action dated January 13, 2006

2

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1: (currently amended) A method for avoiding objects along a path
programmed into a robot comprising the following steps in the order named:

- (a) establishing a field of view for an electronic imager of said robot
along said path,
- (b) obtaining object location information in said field of view,
- (c) deriving a population coded control signal from said object location
information by,
processing a population coded motion energy algorithm that
decomposes a video stream of said object location information into
spatial and temporal frequency components,
processing a population coded velocity algorithm that recombines
said spatial and temporal frequency components corresponding to
said object and provides a velocity output, thereby identifying how
said object is moving in said field of view,
processing a population coded rotation algorithm that determines if
said electronic imager is turning and provides a turning information
output,

SN: 10/689,924
Docket No. S- 99,917
In Response to Office Action dated January 13, 2006

3

processing a population coded translation algorithm that transforms said velocity output of said velocity algorithm into a speed signal and calculates a distance between said object and said electronic imager providing a strategic control vector and a tactical control vector, processing a population coded navigation algorithm where said strategic control vector, said tactical control vector, and said turning information output are used to derive said population coded control signal, and

- (d) transmitting said population coded control signal to said robot, thereby allowing said robot to avoid said object.

Claim 2: (canceled)

Claim 3: (currently amended) A method for deriving a distance from an object

to an electronic imager comprising the following steps in the order named:

- (a) establishing a field of view for said electronic imager,
(b) obtaining object location information in said field of view,
(c) deriving said distance from said object to said electronic imager by,
~~processing a population coded set of algorithms~~ processing a population coded motion energy algorithm that decomposes a video stream of said object location information into spatial and temporal frequency components,
processing a population coded velocity algorithm that recombines said spatial and temporal frequency components corresponding to

SN: 10/689,924
Docket No. S- 99,917
In Response to Office Action dated January 13, 2006

4

said object and provides a velocity output, thereby identifying how
said object is moving in said field of view, and
processing a population coded translation algorithm that transforms
said velocity output of said velocity algorithm into a speed signal and
calculates said distance between said object and said electronic
imager.

Claim 4: (canceled)